

Work Task B1: Lake Mohave Razorback Sucker Larvae Collections

FY08 Estimates	FY08 Actual	Cumulative Accomplishment Through FY08	FY09 Approved Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate
\$200,000	\$149,085.82	\$810,319.82	\$200,000	\$200,000	\$200,000	\$200,000

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Start Date: FY04

Expected Duration: FY55

Long-term Goal: Fish Augmentation

Conservation Measures: RASU3, RASU5, and RASU8

Location: Reach 2, Lake Mohave, Arizona/Nevada

Purpose: Develop the razorback sucker (RASU) brood stock in Lake Mohave, maintain the brood stock, and harvest offspring for rearing as needed to accomplish the LCR MSCP Fish Augmentation Program.

Connections with Other Work Tasks (past and future): Work tasks B2, B4, B5, B6, and B7 are related to this work task, as the RASU to be reared under these work tasks originate from Lake Mohave.

Project Description: The RASU brood stock in Lake Mohave represent the remaining genomes for RASU and provide a level of genetic diversity found nowhere else in the world. This project captures wild-born RASU larvae from Lake Mohave, and delivers them to Willow Beach NFH for initial rearing. Work includes helicopter surveys every 2 weeks to locate spawning groups, night-time larvae collection, and maintaining the boat fleet and field station at Cottonwood Cove. These larvae are captured one at a time, making this a labor-intensive program. Hence, most expenditures are for salary, travel, and fuel.

Work normally commences in January and extends into April. Equipment is delivered to and staged at Cottonwood Cove, where a field station is established. The lake's shoreline is surveyed by helicopter, and locations of spawning aggregations of RASU are recorded. Crews of two to four staff meet at the field stations at sunset, gather batteries, lights, dip nets, and buckets, and set out by boat to the spawning areas. Razorback sucker larvae attracted to submerged lights suspended from the boat are captured by net and are counted. Crews return to the field station, label buckets of larvae, record their capture success and location, place batteries back on chargers, clean and stow other gear, and place air stones in buckets to maintain adequate oxygen levels. The next morning the larvae are transferred to Willow Beach NFH by either boat or

vehicle, where they are logged in as to date received, number collected, and location. This work is repeated 4 to 6 nights per week through mid-to-late April.

Previous Activities: This work is part of a program started by the Native Fish Work Group (NFWG) in 1989 to rebuild the adult stock of RASU in Lake Mohave so that these fish could be used as brood fish for RASU recovery. A portion of the larvae collected are used to sustain brood stock and the remaining larvae are reared for release into reaches 3-5 to accomplish augmentation goals of the program.

FY08 Accomplishments: As was the case with last year’s collection, high survival for RASU larvae captured in 2005 and 2006, combined with concerns regarding quagga mussel invasion, resulted in a target of only 30,000 larvae being required for 2008. RASU larvae for Bubbling Ponds SFH, which normally come from this venture, will be supplied by Dexter NFH due to quagga mussel issues. Twenty-nine thousand seven hundred sixty-eight (29,768) wild larvae were collected from four areas. Contribution of larvae from each zone by month of capture is presented in Table 1.

Table 1. Larval RASU Collected from Lake Mohave, 2008

<i>Zone</i>	<i>January</i>	<i>February</i>	<i>March</i>	<i>April</i>	<i>Total</i>
Nine Mile	0	2,870	3,691	470	7,031
Tequila	0	3,015	4,250	1,751	9,016
Yuma	0	4,050	3,275	2,525	9,850
AOP	0	0	532	3,109	3,871
Total	0	9,935	11,748	7,855	29,768

Reclamation, NDOW, and NPS staff attempted larval collections at 35 sites in the Above Owl Point zone. RASU larvae were present at 26 of the sites visited.

FY09 Activities: A target of 25,000 larvae was established at the Lake Mohave Native Fish Work Group meeting. These will be delivered to Willow Beach NFH for rearing. Presence/absence surveys above Owl Point will lead to a continuation of this work in FY09. A survey will be conducted in the lowermost portion of Lake Mohave to search for additional new spawning sites. A status report covering the larval fish collections from 2005 to 2009 will be developed.

Proposed FY10 Activities: RASU larval collections will continue. Target levels for FY10 through FY14 are 50,000 larvae annually to produce fish for accelerated species research as required in the HCP (See conservation measures RASU3.1 and RASU6).

Pertinent Reports: A status report for the larvae collection program will be developed during FY09.